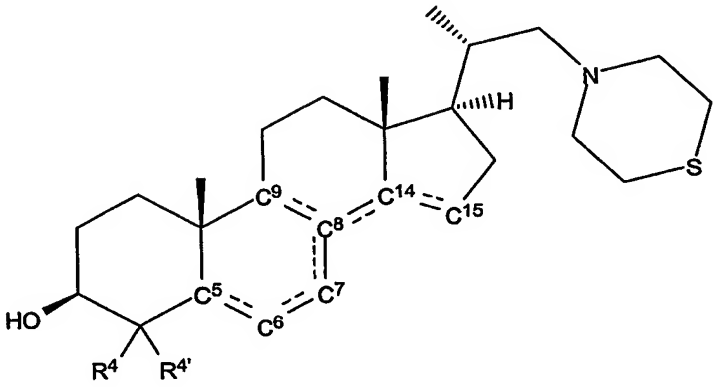
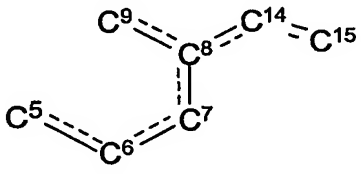
Claims:

1. A thiomorpholino steroid compound of general formula **I**



I

wherein in the moiety **I'** of compound **I**



I'

each bond between between C^5 and C^6, between C^6 and C^7, between C^7 and C^8, between C^8 and C^9, between C^8 and C^{14} and between C^{14} and C^{15}, independently, is a single bond or a double bond, at least one of these bonds being a double bond, with the proviso that there is no double bond in the steroid skeleton

exclusively between C^5 and C^6, and

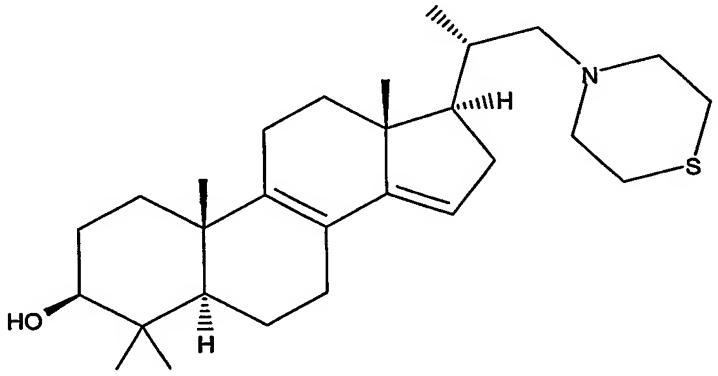
wherein

R^4 and $R^{4'}$ independently, are selected from the group, comprising hydrogen and methyl.

2. The steroid compound according to claim 1, wherein in the moiety with general formula **I'** one double bond is present between C^8 and C^{14} or two double bonds are present between C^8 and C^9 and between C^{14} and C^{15} or two double bonds are present between C^5 and C^6 and between C^7 and C^8.

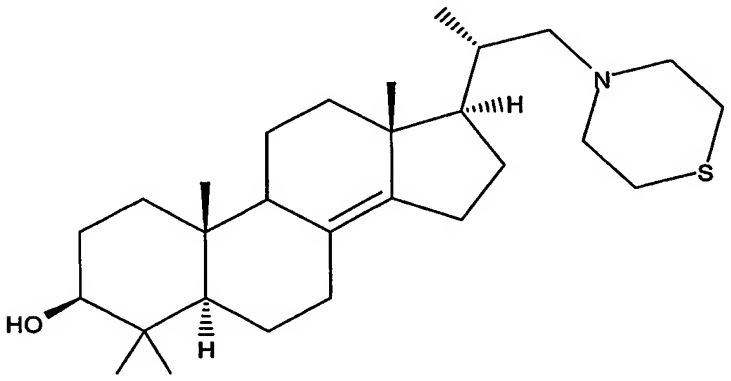
3. The steroid compound according to any one of claims 1 and 2, being selected from the group comprising:

(20S)-20-[(thiomorpholin-4-yl)methyl]-4,4-dimethyl-5α-pregna-8,14-dien-3β-ol:



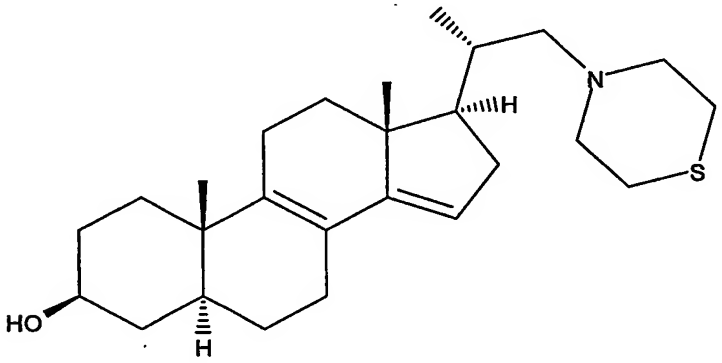
IA

(20S)-20-[(thiomorpholin-4-yl)methyl]-4,4-dimethyl-5α-pregna-8(14)-en-3β-ol:



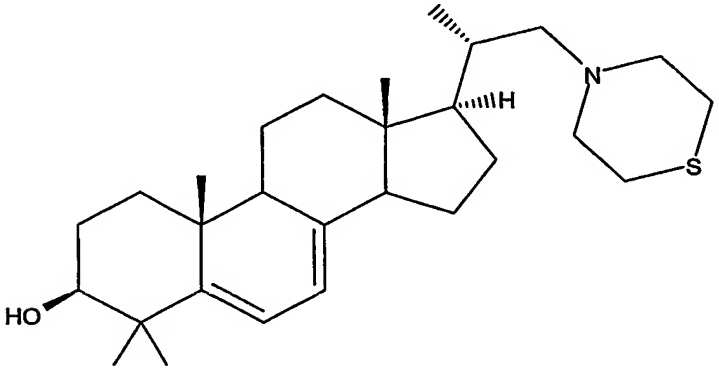
IB

(20S)-20-[(thiomorpholin-4-yl)methyl]-5α-pregna-8,14-dien-3β-ol:



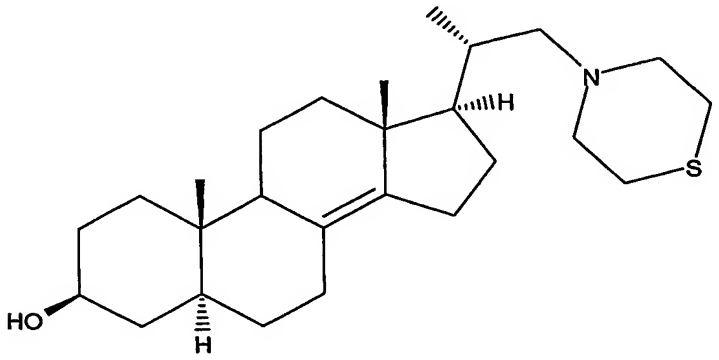
IC

(20S)-20-[(thiomorpholin-4-yl)methyl]-4,4-dimethyl-pregna-5,7-dien-3β-ol



ID

(20S)-20-[(thiomorpholin-4-yl)methyl]-5α-pregna-8(14)-en-3β-ol:



IE.

4. A pharmaceutical composition comprising at least one thiomorpholino steroid compound of general formula **I** according to any one of claims 1 - 3 and at least one pharmaceutically acceptable excipient.

5. The pharmaceutical composition according to claim 4, wherein the steroid compound of general formula **I** is comprised in an effective amount.

6. A use of the thiomorpholino steroid compound of general formula **I** according to any one of claims 1 - 3 to the preparation of a pharmaceutical composition being useful to regulate reproduction, especially meiosis.

7. The use according to claim 6 for non-*in vivo* use.

8. A use of the thiomorpholino steroid compound of general formula **I** according to any one of claims 1 - 3 to the preparation of a contraceptive or of a profertility drug.

9. A method of regulating reproduction, especially meiosis, comprising administering to a subject in need of such a regulation an effective amount of at least one thiomorpholino steroid compound of general formula **I** according to any one of claims 1 - 3.

10. A method for improving the possibility of an oocyte's ability to develop into a mammal, comprising contacting an oocyte removed from the mammal with the thiomorpholino steroid compound according to any one of claims 1 - 3.

11. A method for the preparation of (20S)-20-[(thiomorpholin-4-yl)methyl]--4,4-dimethyl-5α-pregna-8,14-dien-3β-ol, comprising

a) starting from (20S)-20-hydroxymethyl-pregna-4-en-3-one;
b) introducing two alkyl groups in C^4 by alkylation;
c) reducing the keto group to a hydroxy group;
d) protecting the resulting hydroxy group with an acyl group;
e) introducing a Δ^7 double bond by bromination/dehydrobromination;
f) isomerizing the dien $\Delta^{5,7}$ to the dien $\Delta^{8,14}$ by heating in the presence of acid;
g) oxidizing the 17-hydroxy group to an aldehyde group;
h) reductively aminizing the aldehyde group with thiomorpholine and removing the acyl group by reduction reaction

12. The method according to claim 11, wherein the acyl group is a benzoate group.